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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,667	04/13/2004	George Alexanian	6944.13	7623

25265 7590 07/19/2005
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EXAMINER

RODRIGUEZ, PAUL L

ART UNIT	PAPER NUMBER
2125	

DATE MAILED: 07/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/824,667	Applicant(s) ALEXANIAN, GEORGE	
	Examiner Paul L. Rodriguez	Art Unit 2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-26, 32, 33, 42 and 48-50 is/are allowed.
- 6) ☒ Claim(s) 27-31, 34, 39-41 and 43-47 is/are rejected.
- 7) ☒ Claim(s) 35-38 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 June 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed 6/6/05 has been received and considered. Claims 1-50 are presented for examination.

Drawings

2. The drawings were received on 6/6/05 are not acceptable. The figures were previously objected to for failing to provide adequate labeling. The replacement drawing added adequate labeling however removed the reference numbering referred to in the specification, creating another objection. Examiner recommends providing replacement sheets figures 2, 4 and 5 which includes adequate labeling and the reference numbers presented in the specification.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 10-19, 30-33, 40-45, 50-52, 60-63, 70-70 and 80-83. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claims 45 and 46 are objected to because of the following informalities:

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Claim 45 line 3 refers to “said latitude”, previously the claim recited “an approximate latitude”, reference to the same limitation should remain consistent to avoid any possible antecedent problems.

Claim 46 line 3 refers to “said latitude”, previously the claim recited “an approximate latitude”.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 27-31, 37, 38 and 43-47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 27 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. Step c. states “computing a water budget ratio using values in a table of current...data and values in a table of stored...data” and goes on to recite, computing a standard temperature budget factor, computing a periodic temperature budget factor and dividing said periodic temperature budget factor by said standard. The claim omits elements directing how the stored data is used in any of these computations, while the claim has data present, there is no claim language directed to how values are computed or even if the stored data is used in any of the computations.

7. Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. Step b. states “computing a water budget ratio using values in a table of current...data and values in a table of stored...data” and goes on to recite, computing a standard temperature budget factor, computing a periodic temperature budget factor and dividing said periodic temperature budget factor by said standard. The claim omits elements directing how the stored data is used in any of the computations, while the claim has data present, there is no claim language directed to how values are computed or even if the stored data is used in any of the computations.

8. Claim 29 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. Step b. states “computing a water budget ratio using current...data and stored...data” and goes on to recite, computing a standard temperature budget factor, computing a periodic temperature budget factor and dividing said periodic temperature budget factor by said standard. The claim omits elements directed how the stored data is used in any of the computations, while the claim has data present, there is no claim language directed to how values are computed or even if the stored data is used in any of the computations.

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9. Claim 37 recites the limitation "the approximate latitude location" in line 1. There is insufficient antecedent basis for this limitation in the claim. Would be better as "an approximate..."

10. Claim 38 recites the limitation "the approximate latitude location" in line 1. There is insufficient antecedent basis for this limitation in the claim. Would be better as "an approximate latitude location".

11. Claim 43 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. Memory a stores extraterrestrial radiation information, there is a temperature sensor and there is a processing unit connected to the memory and the sensor and the processing unit executes a program which calculates a standard temperature budget factor, a periodic temperature budget factor and divides said periodic temperature budget factor by said standard. However, the claim omit elements directed to how the stored data or temperature data is used in any of the calculations, while the claim has data present, there is no claim language directed to how values are calculated or even if the stored data or temperature data is used in any of the computations.

12. Claim 44 recites the limitation "said microprocessor" in line 2. There is insufficient antecedent basis for this limitation in the claim.

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13. Claim 47 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. Temperature data is measured and a water budget ratio is calculated using measured temperature data and stored extraterrestrial radiation data by computing a standard temperature budget factor, a periodic temperature budget factor and dividing said periodic temperature budget factor by said standard. However the claim omits elements directing how the measured or stored data is used in any of the computations, there is no language directed to how values are computed or even if the stored data or temperature data is used in any of the computations.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 34 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Hopkins et al (U.S. Pat 5,097,861). The claimed invention reads on Hopkins et al as follows:

Hopkins et al discloses (claim 34) an apparatus for automatically adjusting irrigation watering schedules (figure 2) comprising an input device (col. 4 lines 16-32), a microprocessor (reference number 70) having instructions for computing a water budget ratio (a water budget is considered a watering schedule and ratio is considered an adjustment or a proportioning calculation col. 7 line 66 – col. 8 line 30), at least one data storage device (reference numbers 72-74, 76), at least one temperature sensor (abstract, claim 2), a power source (reference number 100) and at least one irrigation water output cutoff switch (col. 7 lines 36-53), wherein said

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instructions comprise dividing a periodic temperature (current actual temperature) budget factor by a standard temperature budget factor (col. 8 lines 16-37, col. 5 lines 59-66, if the temperature changes from normal greater than 10%, a percentage inherently a division was performed), and (claim 40, differing from claim 34) data storage device for storing local geo-environmental data (col. 4 lines 60-67). Examiner would like to point out that any reference to specific figures, columns and lines should not be considered limiting in any way, the entire reference is considered to provide disclosure relating to the claimed invention.

16. Claims 34, 39, 40 and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by Addink et al (U.S. Pat 6,298,285). The claimed invention reads on Addink et al as follows:

Addink et al discloses (claim 34) an apparatus for automatically adjusting irrigation watering schedules (reference number 4) comprising an input device (reference number 230-234), a microprocessor (reference number 210) having instructions for computing a water budget ratio (a water budget is considered a watering schedule and ratio is considered an adjustment or a proportioning calculation, reference number 70, reads on a WBR, the preliminary irrigation schedule is a water budget and the adjustment function calculates a "proportional ratio", to adjust the irrigation schedule), at least one data storage device (reference number 220 in the spec, 230 in the figure), at least one temperature sensor (reference number 300, col. 3 lines 55-65, col. 4 lines 11-13) a power source (reference number 280) and at least one irrigation water output cutoff switch (reference number 270), wherein said instructions comprise dividing a periodic temperature (current actual temperature) budget factor by a standard temperature budget factor (periodic considered an actual measured temperature, stored considered temperature data in the

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storage device col. 3 lines 37-44, the adjustment function in col. 4 lines 8-64 performs various calculations using “raw data such as temperature” and stored geographic data such as average temperatures col. 3 lines 39-42, a division step would be considered inherent because the adjustment function determines a “proportional ratio” col. 4 lines 62-64 for the irrigation schedule adjustment), (claim 40, differing from claim 34) data storage device for storing local geo-environmental data (col. 3 lines 37-44, col. 4 lines 15-19, 32-45) and (claims 39, 41) wherein said at least one temperature sensor is wirelessly connected to said microprocessor (col. 3 lines 51-53, col. 5 line 57 – col. 6 line 7). Examiner would like to point out that any reference to specific figures, columns and lines should not be considered limiting in any way, the entire reference is considered to provide disclosure relating to the claimed invention.

Allowable Subject Matter

17. Claims 1-26, 32, 33, 42, 48-50 are allowed.
18. Claims 35 and 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
19. Claims 37 and 38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim, any intervening claims and the claim deficiencies cited above are corrected.
20. The following is an examiner’s statement of reasons for allowance:

While Hopkins et al and Addink et al disclose a method for automatically operating an irrigation controller comprising the steps of providing said controller with a preliminary irrigation schedule for a geographic location, computing a water budget ratio by comparing current local geo-environmental data with stored local geo-environmental data, and modifying said preliminary irrigation schedule based upon said ratio and an apparatus for automatically adjusting irrigation watering schedules, comprising an input device, a microprocessor, at least one data storage device having instructions for computing a water budget ratio using current local geo-environmental data and stored local geo-environmental data, at least one temperature sensor, a power source, and at least one irrigation water output cutoff switch, and Mecham et al teaches an irrigation controller and method for automatically operating an irrigation controller comprising the steps of providing said controller with a preliminary irrigation schedule for a geographic location, computing a deviation factor by comparing current local geo-environmental data with stored local geo-environmental data, and modifying said preliminary irrigation schedule based upon said deviation factor and an apparatus for automatically adjusting irrigation watering schedules, comprising an input device, a microprocessor, at least one data storage device having instructions for computing a deviation factor using current local geo-environmental data and stored local geo-environmental data, at least one temperature sensor, a power source, and at least one irrigation water output cutoff switch,

none of these reference taken either alone or in combination with the prior art of record disclose a method for automatically operating an irrigation controller wherein the computation of the water budget ratio specifically includes:

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(claim 1, 14, 19) “wherein said local geo-environmental data does not include evapotranspiration data”

(claim 32, 42, 49) “computing a standard temperature budget factor by multiplying an expected maximum temperature by an extraterrestrial radiation value for said geographic location, computing a periodic temperature budget factor and dividing said periodic temperature budget factor by said standard temperature budget factor”,

(claim 35) “said microprocessor computes said periodic temperature budget factor by multiplying an actual recorded maximum temperature by an extraterrestrial radiation value stored in said data storage device”

(claim 36) “said microprocessor computes said standard temperature budget factor by multiplying an expected maximum temperature entered by an extraterrestrial radiation value stored in said data storage device”

(claim 48) “entering the local latitude and expected summer high temperature, computing a water budget ratio by comparing a current high temperature with said expected summer high temperature”

in combination with the remaining elements and features of the claimed invention. It is for these reasons that the applicant’s invention defines over the prior art of record.

21. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Response to Arguments

22. Applicant's arguments, see page 21, filed 6/6/05, with respect to "avoids the use of ET (evapotranspiration) data" and amending the claims where any local geo-environmental data does not include evapotranspiration data have been fully considered and are persuasive. The rejections of claims 1-25 has been withdrawn.

23. Regarding the drawings, while the Examiner previously objected to the figures for failing to provide adequate labeling, the amended drawings submitted, now fail to include reference numbers recited in the specification, objections remain.

Regarding the claim objections, deficiencies in the claims remain and objections are presented above.

Regarding the claim rejections under 112 2nd, deficiencies and rejections remain.

24. Regarding the rejections under art. Applicant's arguments filed 6/6/05 directed to "water budgeting", "ratio" or "computing a water budget ratio" have been fully considered but they are not persuasive.

The Examiner interprets the term "water budget ratio" (WBR) to be simply a value used to adjust or perform a variation of a previous value. The word "budget" is defined as "a quantity involved in, available for, or assignable to a particular situation" and "a plan for the coordination of resources", based upon this the Examiner considers the term "water budget" to read on an irrigation schedule, a determined quantity and coordination or resources, where the irrigation schedule is a determined amount of water is to be applied. The word "ratio" is defined as "the

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relationship in quantity, amount, or size between two or more things: proportion, and “proportion” is defined as “the relation of one part to another or to the whole with respect to magnitude, quantity or degree”. Therefore, a ratio, is a relative quantity. Referring to applicant’s description on pages 26-27 of the specification, WBR is a determination as to how much the current irrigation amount is to be modified to meet the current needs of the system and is based upon current temperature and a standard temperature. Therefore, in response to applicant’s specific argument, Addink et al teaches a ratio in col. 4 line 63 and teaches an “adjustment” to the irrigation schedule using the ratio, therefore the Examiner, based upon a reasonable interpretation of the term “water budget ratio”, considers that when an application amount is varied based upon the sensed values verses normal values and where a proportional adjustment amount is applied based upon data “such as temperature, wind, solar radiation and humidity”, col. 4 lines 8-13, and an adjustment to the “preliminary irrigation schedule” is performed, these are considered to read on an adjustment, which is based upon a water budget ratio.

Regarding the amendment to overcome Hopkins and Addink, specifically directed to evapotranspiration data. The amended language is directed to the exclusion of ET data, therefore the rejection has been withdrawn.

Regarding the rejection under 103. Applicant argues that no where does Hopkins make any mention of “water budgeting” or any “ratio” much less computing a water budget ratio. Given a reasonable interpretation of the term “water budget”, this term simply refers to an irrigation schedule, how much water and when to apply, Hopkins teaches an irrigation schedule. A ratio is a relationship in quantity, amount or size between two or more things, a proportion,

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and proportion is the relation of one part to another or to the whole. Hopkins teaches using stored data and user supplied variables to calculate a water schedule. Hopkins et al clearly states that water schedule calculations are based upon stored constants and user supplied variables. Therefore a water budget or schedule is established. Also is the watering amounts are proportioned based upon daily variables, based upon this Hopkins et al teaches a water budget ratio.

Regarding the rejection of claim 13, the rejection is withdrawn based upon the exclusion of ET data.

Regarding new claim 26, applicant states that claim 4 was re-written as claim 26, however, claim 26 is dependent from claim 19, it is assumed that applicant intended to refer to claim 27 which stands rejected under 112 2nd.

Applicant states that claim 45 is claim 22 re-written in independent form, however claim 45 depends from claim 43, it is assumed that applicant intended to refer to claim 49.

Conclusion

25. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

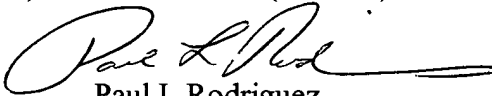
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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul L. Rodriguez whose telephone number is (571) 272-3753. The examiner can normally be reached on 6:00 - 4:30 T-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Paul L Rodriguez
Primary Examiner
Art Unit 2125

PLR
7/13/05